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ABSTRACT

The 2005 Task Force of the Chancellor's Consultation Council was created to recommend long-term strategies to identify access and service goals for California Community Colleges (CCC), the resources needed to achieve these goals, and ways to obtain needed resources. This technical paper provides the Task Force with forecasts of plausible scenarios and the likely results of alternative policy proposals under consideration. The paper begins with a summary of scenarios for California's economic future. It then discusses possible policy options that can be analyzed against assumptions such as growth in personal income, general fund revenues, and population changes. Forecasts for major scenarios, distinguished primarily by the condition of California's economy between now and the year 2005 are modeled, and their consequences compared with each other. Finally, the paper addresses the ideal CCC goal of improving access, whilhile at the same time enhancing quality. Results indicate the unlikelihood of securing both desired CCC access levels and needed program resources between now and 2005 under existing policy and practice. Recommended goals of the Task Force substantially exceed the revenues that Proposition 98 will provide. (YKH)

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Funding Scenarios in California Community Colleges

A Technical Paper for the 2005 Task Force of the Chancellor's Consultation Council

November 1997

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Table of Contents

Summary 1

Introduction 3

Model 5

Assumptions 7

Policies 11

Forecasts 15

Proposals 19

Tables and Figures 29

List of Charts and Tables

Table1	Factors in Forecasting Model
Table 2	Economic and Demographic Factors
Figure 1	Assumed Values and Forecasts, Scenarios A, B and C, Personal Income and Unemployment
Figure 2	Assumed Values and Forecasts, Scenarios A, B and C State and General Fund and Local Property Tax
Figure 3	Assumed Values and Forecasts, Scenarios A, B and C Population and K-12 ADA
Figure 4	Assumed Values and Forecasts, Scenarios A, B and C California CPI and CCC Student Costs
Table 3	Policies and Assumptions
Figure 5	Assumed Values and Forecasts, Scenarios A, B and C Community College Enrollment
Figure 6	Assumed Values and Forecasts, Scenarios A, B and C Community College Participation Rates
Table 4	Community College Funding Summary, Scenario A
Table 5	Community College Funding Summary, Scenario B
Figure 7	Community College Funding
Table 6	Community College Funding Summary, Scenario C
Table 7	Community College Funding Summary, Scenario M
Table 8	Community College Funding Summary, Scenario N
Figure 8	Proposed Community College Funding
Table 9	Summary of Community College Planning Scenario

Summary

Future Scenarios is one of a series of four technical background papers prepared for use by the 2005 Task Force of the Chancellor's Consultation Council. This Task Force was formed in Spring 1997 and asked to help the Board of Governors and Chancellor develop strategies for addressing the challenges of the future facing California Community Colleges. The other technical papers in this series:

Access

Funding Patterns

Trends of Important to Community Colleges

Task force deliberations relied on these and other sources of information to recommend long-term strategies to identify access and service goals for California Community Colleges through 2005, the resources needed to achieve these goals, and ways to obtain the needed resources.

This technical paper was prepared to provide the Task Force with forecasts of different plausible scenarios and the likely results of alternative policy proposals being considered. The paper begins with a review of pertinent trends and assumptions that are required to model overall California Community College (CCC) delivery and funding. Then, the discussion covers the key CCC policy options that may be analyzed against these assumptions. Forecasts for major scenarios are modeled, and their consequences compared. Finally, results are analyzed for the ideal CCC goal of improving access, while at the same time enhancing quality.

Scenarios A, B, and C are distinguished primarily by the condition of California's economy between now and the year 2005:

Scenario A: Robust economic growth, without any significant downturn.

Scenario B: Lower than than historic growth with typical recession around 2000.

Scenario C: Like historic growth patterns with typical recession around 2000.

The very robust economic scenario (A) results in CCC enrollment increasing to just over 2 million students by the year 2005. But, but even when the economies-of-scale inherent in growth are considered, CCC still are not funded for any improvements to quality, for changing technologies, or for necessary improvements to the colleges' infrastructure. Access is substantially improved, but at the expense of quality. Scenario B, with less economic growth and fewer future enrollments, produces greater funding gaps and little improvement in access. Results of the most likely external scenario, C, are similar. Thus,

- it will probably not be possible, under existing policy/practice and likely future Proposition 98 revenues, to secure both desired CCC access levels and needed program resources between now and 2005.

Goals recommended by the task force are modeled in scenarios M and N. In each case, college funding needs—proposed to increase by an average of nearly ten percent annually—substantially exceed the revenues that Proposition 98 will provide. The latter are more likely to increase at rates between four percent and six percent annually. The gap, between what will be needed and will be available, grows to at least $2 billion by 2005: more than one-fourth of the $7.6 billion needed by that year.

Introduction

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Two other scenarios are described in this paper:

Scenario M: Proposals by the 2005 Task Force where economic growth is robust and Proposition 98 revenues are produced as in Scenario A.

Scenario N: Proposals by the 2005 Task Force where historic economic growth patterns prevale, a typical recessin occurs around 2000, and Proposition 98 revenues are produced as in Scenario C.

Model

For this work, a computer-based model was designed and implemented to characterize the determination of revenues and expenditures for California Community Colleges through the year 2005.

Model variables describe the past and future California economy, general and Proposition 98 revenue production, Community College share of Proposition 98 revenues, enrollments and expenditures. A dozen important input variables for the model are outside the control of community college policymakers and, therefore, future values for them must be either assumed or forecast (see Table 1). Another six variables describe the various policy options over which the Board of Governors and Chancellor have some direct or indirect control.

Values for the dozen and a half input variables are manipulated through the computational logic of the model's "inference engine" so as to produce six major outputs for use in assessing the consequences of different scenarios for the colleges: enrollment, FTES, service levels (enrollment/population), revenues, expenditures, and budget gap (revenues less expenditures).

Data used in the model constitute most—about four-fifths—of what is called the community college Educational and General budget. Revenue from enrollment fees and Proposition 98 (state general funds and local property tax revenues) are analyzed. Revenues from federal sources, the lottery, private gifts and grants, sales and services, and nonresident student fees are not. Accordingly, FTES counts include resident, but not nonresident students. Likewise, contract education and community service programs and expenditures are excluded. Most often, these excluded functions and revenues are externally dedicated or categorically restricted in their use and, therefore, their future values would be difficult, if not impossible to predict. Despite this, strategies involving them may solve to some degree problems characterized by the gap.

Assumptions

Assumptions, including forecasts by other agencies like the Department of Finance (DOF), Rand, CPEC, and the Center for the Continuing Study of the California Economy (CCSCE) are made for: California personal income, unemployment, general fund revenue, local property taxes, population, K-12 ADA, prices and student academic load (See summary Tables 2 and 3; and Figures 1 through 4.)

Personal Income

CCSCE forecasts a robust, greater than historic, economic future for California, with 3.3% yearly increases in real (price-adjusted) income through the next decade to 2005. (See Table 1 and Figure 2.) This is the basis of *Scenario A*, and optimistically appears to rule out any serious recession during the period. Other forecasts, forming the basis for *Scenario B, are* based on *more moderate* (possibly less-than historic) gains, together with a likely downturn around 2000. A third, and possibly more realistic forecast, *Scenario C*, incorporates the inevitable downturn around 2000, but is based on a slightly higher rate of growth than *Scenario B*, that is more in line with historical rates. The actual outcome is uncertain, but continued close management of interest rates and inflation by the Federal Reserve Board may well result in economic cycles that are longer and less volatile than those of the past. (See paper on *Trends Important to Community Colleges* for a more extensive discussion of California's economic cycles and their implications for the colleges.)

Unemployment

Unemployment is a significant determinant of CCC enrollment: when one rises, the other declines, other things being equal. Consequently, our model requires an estimate of future values of unemployment. While no long-term forecasts of unemployment are available, it is negatively correlated with personal income and can be projected as a function of income (Table 2, Figure 1).

Consistent increases in the CCSCE personal income series used in Scenario A tend to minimize fluctuations in the rate of change in unemployment. As noted this situation is quite unlike—more optimistic than—actual patterns of the past quarter century. Scenarios B and C present different, more historically-based patterns.

General Fund Revenue

As noted in Table 2, Figures 1 and 2, General Fund revenues are highly elastic with respect to income; that is, when the rate of change in income shifts, General Fund revenue changes typically shift as much as or even more than income. And, of course, revenues shift also when tax policy is changed, as it was in 1991: while growth in the State's personal income that year was negligible, tax rate increases produced a substantial 8 percent increase in General Fund Revenue. *In all three Scenarios A, B and C, we assume that General Fund revenue increases at the same rate (an elasticity equal to one) as does personal income* over the eight year period ending 2005.

Local Property Taxes

Growth rates in assessed valuation and in property tax revenues—under the Proposition 13 controls—slowed dramatically during the recent recession years of 1993-96 (Table 3 and Figure 2). DOF forecasts that property tax revenues will increase by 3.4% in 1997, and we assume *that this annual rate of increase rises to 5% in Scenario A,* moves to *lesser, variable rates in Scenario B,* and to *midrange estimates in Scenario C.*

Population

Current DOF projections show that the state's *growth resumes after having slowed during the recent recession* (Table 2, Figure 3). However, DOF's projected future rates of growth (both in adults and in the total population) of less-than 2% annually do not quite return to the levels that were characteristic of California during the 1970s and 1980s (generally >2%, sometimes as high as 3%).

Apart from the state's *increasing diversity*, the other most notable aspect of future population change is the *surge in 18-24 year olds*, the "baby boom echo" that is beginning and which will continue well through 2005. This has major implications for CCC since the participation rates from this group are the highest.

K-12 Average Daily Attendance (ADA)

DOF projections are used here for all scenarios, and suggest that *growth rates for K-12 ADA* which averaged between 2% and 3% annual gain during the past decade,

will drop to between 1% and 2% average annual gain during the coming decade (Table 2, Figure 3). As we see below, this factor severly restricts the growth of Proposition 98 revenues.

Price Changes

Price increases, whether in the California Consumer Price Index (CPI: costs of goods typically purchased by Californians) or in the State and Local Government Purchases Index (S&LGPI), were rapid in the late 1970s, slowed in the 1980s, and have slowed further in the 1990s (Table 2, Figure 4). Historically, the CPI has been considerably more volatile than the S&LGPI, but over the past quarter century, the two indices have increased at nearly equal cumulative rates (each by five-fold since 1970).

Most forecasters feel that modest growth in both production and prices will be the rule through the end of this decade and into the next century. *We assume in all scenarios that both the California CPI and the S&LGPI will increase at the moderate rate of 3 percent each year.*

Recent discussion by the Boskin Commission suggests that the CPI, and possibly other implicit price deflators, like the S&LGPI, may be overstated by as much as 0.5 to 1.5 percentage points because they don't adequately measure changes in the quality of goods and services, and because they put too much weight on manufactured goods, while putting too little weight on the production of services and knowledge. A change in the S&LGPI could impact future CCC funding, but that is not discussed here.

Policies

A number of different policies are key to the consequences of any of these projected futures, including student fees and financial aid, Proposition 98 revenue and the CCC share, and CCC finance methods.

Student Enrollment Fees and Other Direct Costs

In scenarios M and N, where we model the Task Forces recommendations, student *fees will decrease through recent legislation from $13 per unit to $12, beginning 1998, then are assumed to remain at that level through 2005; accordingly, the proportion of students whose fees are waived remains at 36%, also through 2005.. Other direct costs (child care, transportation, books and supplies) are assumed to increase at the same rate as the cost-of-living*, using the California CPI (Figure 4). Existing Board policy advocates moderate and predictable increases in student fees, together with appropriate increases in student financial aid. If tied to the California CPI, for instance, the CCC enrollment fee would have increased from $13 per credit unit to $14 in 1999, $15 in 2001, and $16 by 2004. Such increases, however, add only a modest amount of revenue—$20 million by 2004—and, of course, constrain student access.

Historically, student fees and direct costs have increased at or just below the rate of general inflation, with several notable exceptions: 1984 when the enrollment fee was introduced, 1993 when the enrollment fee was increased for all students and a surcharge for students with baccalaureates was imposed, and 1996 when the surcharge was eliminated. Studies show that community college students, especially those who attend part-time, are very responsive to changes in price of college attendance. This behavior is incorporated in our forecasting model.

Proposition 98 Revenue Guarantee for K-12 and CCC

We assume that *Proposition 98 and related law will continue to determine most CCC revenues through 2005*. Proposition 98 generates funding for K-12 and CCCs under one of three formulas or "tests." Test 1 requires that Proposition 98 General Fund revenue be not less than a fixed percentage (the 1989-90 level) of total State General Fund revenue. Annual percent changes in K-12 ADA are added to percent changes in personal income per capita to develop what is called the "Test 2" value for

the total Proposition 98 increase. From this total, estimated local property taxes are deducted to determine the General Fund share. A final Test (3) for determining Proposition 98 revenue comes into play when the percentage change in State General Fund Revenue per capita is more than a half percentage point below that of the change in personal income per capita.

Since 1988, Test 3 has been in play five times (including the current year, 1997-98), Test 2 four times, and Test 1 once, in 1994. Given the nature of our projections, and the assumption that General Fund revenues increase at the same rate as personal income, *Test 2 is in place for all scenarios over the entire forecast period ending at 2005.* In Scenario A, the Proposition 98 share of the State General Fund increases, from about 40% currently to between 42% and 43%, by 2005. In Scenario B, the Proposition 98 share remains relatively constant at just above 40%; and in C fluctuates at nearly 41% over most of the ten year forecast period. Calculations include scheduled repayment, through 2001, of an earlier General Fund loan totaling $1.76 billion.

CCC Share of Proposition 98

Historically, CCCs have not been able to obtain their "statutory share" of Proposition 98 (defined as the 1989-90 level of about 10.9%), and the current 1996-97 CCC share is estimated at 10.3%. *In Scenarios A and B we assume the current CCC share of Proposition 98 remains constant through 2005.* A modest change in the sharing percentage is significant for CCCs. The K-14 Coalition has agreed that the CCC share should increase up to *10.6% by 2000-01; thereby, adding an annual $70 million to the CCC* portion of the Proposition 98 total by that year, if implemented. The likelyhood of this policy being implemented isn't clear, particularly given the priority placed on K-12 reform efforts, like reduced primary class sizes, some of which are already underway. However, the 1997-98 Governor's Budget represented an increase in shares, and all scenarios here assume it increases according to the coalition's agreement.

CCC Finance

We assume that, apart from marginal changes, *CCC districts will continue to be funded by a formula* in which a cost-of-living adjustment (COLA), FTES growth, and certain kinds of categorical program improvements and infrastructure maintenance are provided each year. We also assume that the *growth cap will continue to exceed the statutory rate limit* of adult population growth. Projections of need are based on the *average cost of FTES rising each year by the COLA (S&LGPI).* In addition, *program improvements are set at 2%* of the base in Scenarios A, B, and C; half of which are added to the base, as on-going commitments, and the other half assumed to be one-time

expenditures, for example, to purchase equipment or make technological upgrades. Scenarios M and N, by contrast incorporate annual increases of 3% in COLA, 4% in FTES growth funding, and 3% for program improvement, all of which is added to the colleges' base budgets.

As noted above, the following forecasts exclude income from sources like the lottery, federal revenues, and local "miscellaneous" funds such as nonresident tuition, sales and services revenue, and private gifts and grants. Altogether these funds account for about one-fifth of total CCC revenues, but many of them are specifically restricted in their use and their future levels are especially difficult to forecast.

CCC Enrollments and Full-Time Equivalent Students (FTES)

The Chancellor's Office econometric model used to forecast CCC enrollment takes the historic behavior of colleges and students with respect to: (1) budgets, (2) growth control(funding cap), (3) fees and other direct costs facing students, and (4) adult population changes, and estimates future enrollments as a joint function of these four independent variables.

In each scenario, CCC budgets are a function of Proposition 98 revenues, and, as noted above, the DOF forecast is used for adult population. Also noted above, the FTES growth cap stays in place, but typically exceeds adult growth, and, finally, while fees are constant ($12 per unit), other direct costs facing students (child care, transportation, books and supplies, etc.) increase at the rate of inflation. Our model accurately predicts enrollment if the assumptions and forecasts for these four independent variables are reasonably accurate. Results of scenarios A, B, and C are depicted in Figure 5.

The enrollment forecast in Scenario A results in a substantial increase of nearly 50% in the coming decade. As expected, Scenario B results in the CCC enrolling fewer students, but still a 31% increase during the same period, while Scenario C results in a 36% increase:

	1996	2000	2000
Scenario A:	1,396,434	1,671,909	2,078,792
Scenario B:	1,396,434	1,610,649	1,822,271
Scenario C:	1,396,434	1,634,645	1,900,067

FTES can be estimated as a function of the composition of enrollment (balance of full- and part-time) from economic conditions, societal preferences, and policies and practices of UC and CSU with regard to lower division students. In the early 1990s, for instance, the enrollment losses at CCCs (largely among part-time students because of budget reductions and fee increases), together with rising unemployment and increased student charges at UC and CSU, resulted in an increase of nearly one weekly class hour—from 8.1 to 9.0 hours or 11 percent—in the average CCC student academic load. Now that these conditions are generally reversed, average CCC student academic loads would drop somewhat, except that the increase in 18 to 24-year-olds and their higher loads will tend to offset that drop. Consequently, we assume that *loading declines in 1997 and 1998 as more baccalaureate students return, then, because of a number of compensating factors loading remains relatively constant from 1999 through 2005* (Table 3).

Under the robust economic assumptions of Scenario A, enrollment increases for the reasons outlined above and, as a result, CCC participation rates increase to 75 enrollments per 1,000 adults. This would represent a level that characterized CCCs in the early 1980s. The modest economic assumptions of Scenario B result in smaller CCC enrollment increase, raising the participation rate to 65 per 1,000 adults, while Scenario C results in CCC participation returning to the 1990 level of 68/1,000. Even if Scenario C is likely and even if the 68/1,000 participation rate was deemed adequate—not supported by arguments in the paper on *Access* - the fiscal results forecast below don't appear to provide sufficient resources to enable the CCC to maintain its infrastructure or to develop new programs and uses of technology in the needed fashion.

Fiscal Consequences

Our estimate of fiscal need is based upon expected FTES and a calculated CCC operating budget outlay per FTES (Tables 4-8, and Figures 7 and 8). The outlay per student, estimated at $3,500 per FTES in 1996-97, is projected into the future, using the State and Local Government Purchases Index (S&LPGI). The S&LPGI is used to determine the annual "cost-of-living" adjustment (COLA) needed to operate community colleges, and is considered a fair representation of college costs. Also, we assume (perhaps conservatively) in scenarios A, B, and C that program improvements should be set each year at 2% of the budget base, half of which is added to the base, for ongoing commitments, and the other half assumed to be one-time expenditures, for example, to purchase equipment or make technological upgrades.

Where the fiscal need exceeds available revenues, as it does by $657 million for 2005-06 in Scenario A, one might assume that a part of this "gap" will be met by economies-of-scale as colleges grow; i.e., the marginal or incremental costs of adding FTES are less (per FTES) than the average cost of existing FTES (See Table 4 and Figure 7). (Lending support to this idea are empirical results from our enrollment forecasting model which indicate that the colleges typically grow more than one would expect from changes in budget revenues and average costs.) The "unexplained" balance of the gap, not attributable to scale-economies, then would represent a definitive decline in the amount of resources necessary for the education of each CCC student, and perhaps be reflected in neglect of the infrastructure; i.e., maintenance of plant, development and training of faculty, and the like. In any case, the projected gap clearly indicates a lack of resources for such initiatives as quality improvement, keeping pace with technological change, and/or maintaining the college infrastructure of human and physical resources.

Thus, while CCCs might well reach an acceptable service level (say, 70 to 80 enrollments per 1,000 adults) as in Scenario A, there still would not be sufficient funds to maintain the real levzel of resources needed for the education of each CCC student.

Results from Scenarios B pose more difficulties (Table 5 and Figure 7). This level of Proposition 98 funding would provide substantially less revenue for CCC and, therefore, the CCC are likely to enroll fewer students (than in A), falling short of desired access service levels. Moreover, the fiscal "gap" is even greater in B than in A, rising to more than $900 million in 2005-06, nearly 22% more than available revenues.

Scenario C (Table 6) provides perhaps the most realistic baseline numbers, incorporating the most-probable assumptions. And, the participation rates forecast (68/1000 by 2005) could be argued as a valid policy goal, given the experience of the late 1980s. However, a sizeable revenue gap (rising to just over $800 million by 2005) in this scenario suggests that:

- it will probably not be possible, under existing policy/practice and likely future Proposition 98 revenues, to secure both desired CCC access levels and needed program resources between now and 2005.

Proposals

The statewide CCC participation rate is currently at 59 enrollments per 1,000 adults, the lowest level since the 1970 (Figure 6; refer also to paper on *Access*). Many factors suggest that current CCC participation rates should be much higher than those of three decades ago, including:

- substantial increases in job skills due to technological change
- emerging role of CCC in workforce preparation for economic development
- welfare reform and the need to increase participation of low income and underrepresented students
- the many more immigrants needing ESL, basic skills, and further training

Examining historical access rates, one might argue that the early 1980s, with participation of more-than 70 enrollments per 1,000 adults, represent something of a benchmark. The 1982 level, for instance, resulted from policies of tax reform (Proposition 13, 1978) and curriculum reform (reduction of $30 million or 2% of total budgets in 1982), and just preceeded an arbitrary funding reduction in 1983 and the beginning of the cap on state funding for CCC growth. More recently, improvements in access from the broad scale reforms in AB 1725 (1988) were interrupted in their rise, at the 68/1,000 level, by the 1991 to 1994 recession.

Scenarios M and N both incorporate the Task Force proposal which would raise service levels toward 80 enrollments per 1,000 adults. The Task Force would do this by adopting an average yearly growth target of 4% FTES gain through the year 2005. This growth would raise the service level from the current 61/1000 to about 73/1000 by 2005. The technical paper on *Access* argues for at least this or a higher level of increase. In addition, Scenarios M and N would provide for an annual cost of living increase (COLA), averaging 3% annually, and for improvements in the quality of community college programs and services, at a rate of 3% of the base—to be added to the base—each year. This contrasts with Scenarios A, B, and C which schedule a 2% improvement—with just half added to the base—for each year through 2005.

In scenario M, California personal income increases between 6 and 7 percent annually and, assuming that Test 2 of Proposition 98 prevails, revenues for Community Colleges will increase at an average of 5.8% annually through 2005 (Table 7 and Figure 8). Even this optimistic forecast, however, falls short of providing the 10% annual expenditure increase proposed by the 2005 Task Force. In fact, the annual deficit under Scenario M rises to just over $2 billion—of the $7.6 billion needed.

Scenario N portrays the same Task Force 2005 proposal, this time set against the more likely economic conditions embodied in Scenario C (Table 8 and Figure 8). Here, the deficit becomes even greater, rising to $2.6 billion by 2005.

Summary results of the several scenarios are displayed in Table 9. The scenarios range widely in their enrollment growth, CCC participation rates, and funding "gaps." All scenarios pose substantial gaps, given our assumptions and conditions. It appears that given anticipated demand for CCC by Californians, and given the need to improve CCC service levels, none of the scenarios provide for both the desired levels of access and quality. To achieve these levels simultaneously will require substantial changes in policy and practice.

Table 1
Factors in Forecasting Model

Assumptions and Other Forecasts

- personal income
- unemployment
- state general fund revenue
- local property taxes
- k-12 ada
- adult population
- total population
- california consumer price index
- state and local government purchases index
- student costs (child care, transportation, books, supplies)
- proposition 98 tests
- student academic load

Policy Input

- student enrollment fees
- student financial aid
- community college share of proposition 98
- community college finance cola, growth,
- improvement and resource maintenance

Forecast Output

- enrollment
- full-time equivalent students (ftes)
- service levels (enrollment/population)
- revenue
- expenditure need
- difference (gap)

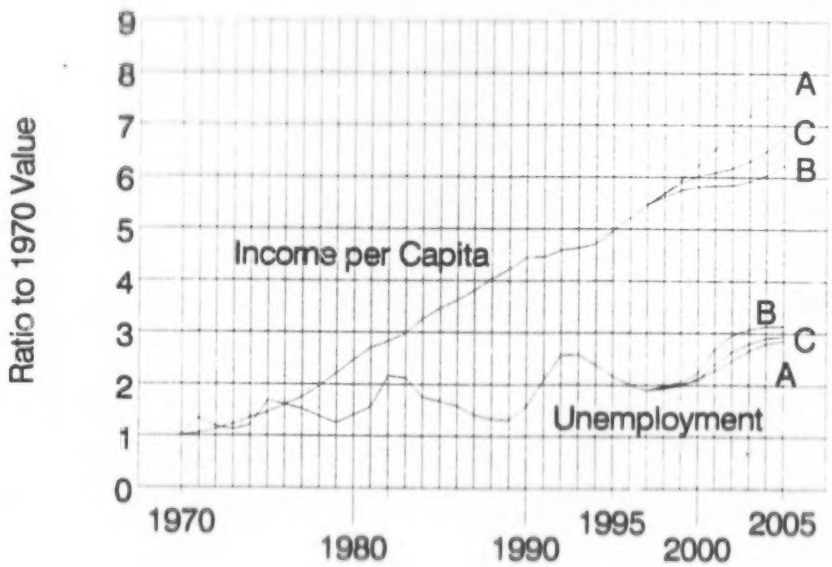
Table 2
Economic and Demographic Factors
Assumed Values and Forecasts

	Percent Changes for:							
	Personal Income	Total Population	Income Per Capita	Adults	Unemploy	K–12 ADA	S&LGPI	CA CPI
Average annual changes for historic periods:								
1970–75	9.4%	1.5%	7.9%	2.1%	11.0%		8.4%	6.9%
1975–80	13.3%	2.0%	11.1%	2.8%	–3.4%		7.9%	9.9%
1980–85	9.2%	2.1%	7.0%	2.1%	3.4%		5.9%	5.1%
1985–90	7.8%	2.5%	5.2%	2.7%	–1.3%	3.0%	3.6%	4.2%
1990–95	3.6%	1.4%	2.2%	1.0%	6.7%	2.4%	2.4%	2.5%
Forecast (Scenario A):								
1995–00	6.6%	1.9%	4.7%	1.5%	–0.4%	1.9%	3.0%	2.7%
2000–05	6.6%	1.8%	4.8%	1.8%	6.2%	1.5%	3.0%	3.0%
Forecast (Scenario B):								
95–00	5.2%	1.9%	3.2%	1.5%	0.8%	1.9%	3.0%	2.7%
00–05	3.2%	1.8%	1.4%	1.8%	7.2%	1.5%	3.0%	3.0%
Forecast (Scenario C):								
95–00	5.9%	1.9%	3.9%	1.5%	–0.5%	1.9%	3.0%	2.7%
00–05	4.2%	1.8%	2.4%	1.8%	7.0%	1.5%	3.0%	3.0%

Sources: Chancellor's Office, California Community Colleges, Research and Analysis.

Figure 1
Assumed Values and Forecasts
Scenarios A, B and C

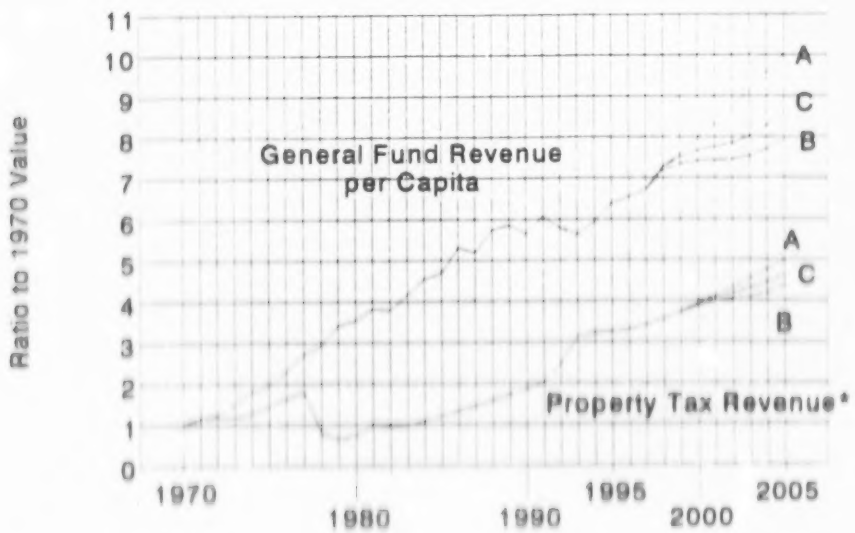
Personal Income and Unemployment
1970-95 Actual; 1996-2005 Estimated



Sources: Chancellor's Office, California Community Colleges, Research and Analysis, April 15, 1997.

Figure 2
Assumed Values and Forecasts
Scenarios A, B and C

State and General Fund and Local Property Tax
1970-95 Actual; 1996-2005 Estimated

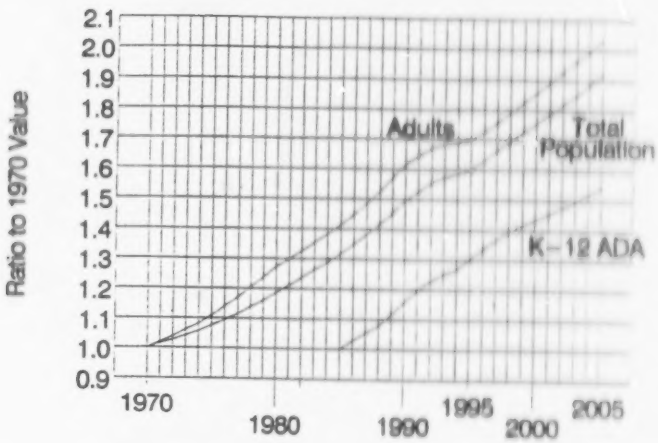


*Property Tax Revenues for Community Colleges

Sources: Chancellor's Office, California Community Colleges, Research and Analysis, April 15, 1997.

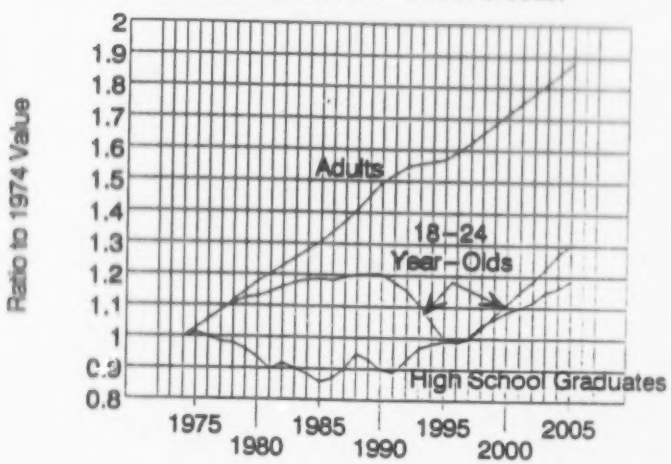
Figure 3
Assumed Values and Forecasts
Scenarios A, B and C

Population and K-12 ADA
1970-95 Actual; 1996-2005 Estimated



SOURCE: Chancellor's Office, Research and Analysis 02/04/97

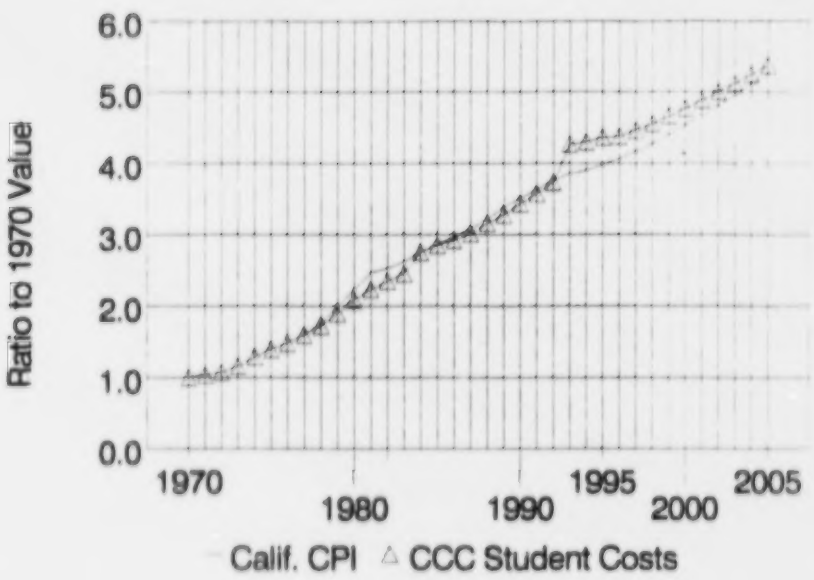
1974–94 Actual; 1995–2005 Forecast



Sources: Derived from Department of Finance, 1996; California Postsecondary Education Commission, 1995.

Figure 4
Assumed Values and Forecasts
Scenarios A, B and C

California CPI and California Community College Student Costs
1970-95 Actual; 1996-2005 Estimated



Sources: Chancellor's Office, California Community Colleges, Research and Analysis, February 4, 1997.

Table 3
Policies and Assumptions

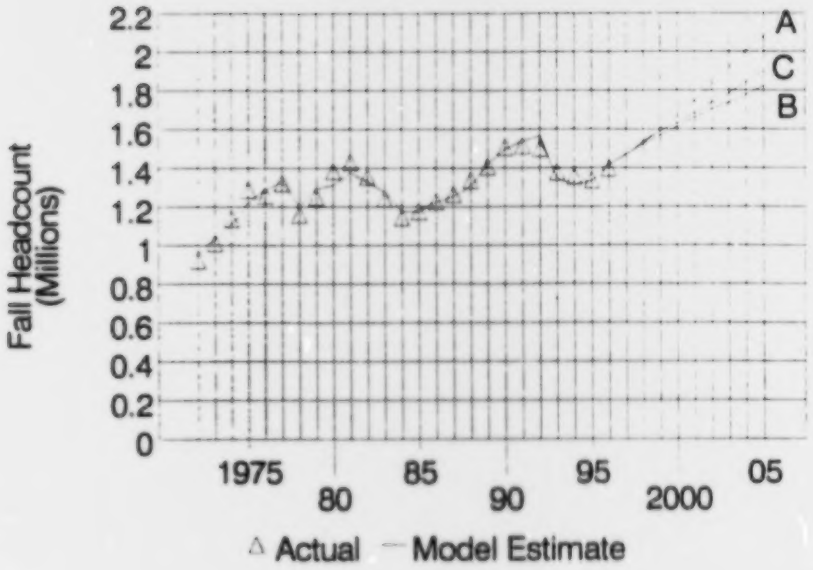
1988–89 1990–91	Share of P98 %	Local Prop. Tax %Chg.	Student Fees $/unit	% Aided	COLA = S&LGPI %Chg.	Growth > Adult	Improve-ments %ofBase	Ratio FTES of Enroll.
1991–92				16.3%				0.6057
1992–93				19.9%				0.5978
1993–94	8.06%	25.7%		28.5%	2.1%			0.6277
1994–95	9.47%	3.6%		33.8%	1.5%			0.6288
1995–96A	9.95%	0.7%		34.9%	3.0%			0.6513
1996–97E	10.26%	1.6%	$13	34.8%	3.1%	yes	0.0%	0.6410
1997–98B	10.30%	3.4%	$13	36%	3.0%	yes	2.8%	0.6400
1998–99F	10.40%	4.0% *	$12	36%	2.9%	yes	3.0%	0.6300
1999–00	10.50%	5.0%	$12	36%	3.0%	yes	3.0%	0.6300
2000–01	10.60%	4.0%	$12	36%	3.0%	yes	3.0%	0.6300
2001–02	10.60%	3.0%	$12	36%	3.0%	yes	3.0%	0.6300
2002–03	10.60%	1.0%	$12	36%	3.0%	yes	3.0%	0.6300
2003–04	10.60%	1.0%	$12	36%	3.0%	yes	3.0%	0.6300
2004–05	10.60%	3.0%	$12	36%	3.0%	yes	3.0%	0.6300
2005–06	10.60%	4.0%	$12	36%	3.0%	yes	3.0%	0.6300

* Forecast here is for Scenario C.

Sources: Chancellor's Office, California Community Colleges, Research and Analysis, April 15, 1997.

Figure 5
Assumed Values and Forecasts
Scenarios A, B and C

Community College Enrollment
1972-95 Actual; 1996-2005 Estimated



Sources: Chancellor's Office, Research and Analysis Unit, April 15, 1997

Results from *Chancellor's Office 1997 Forecasting Model*

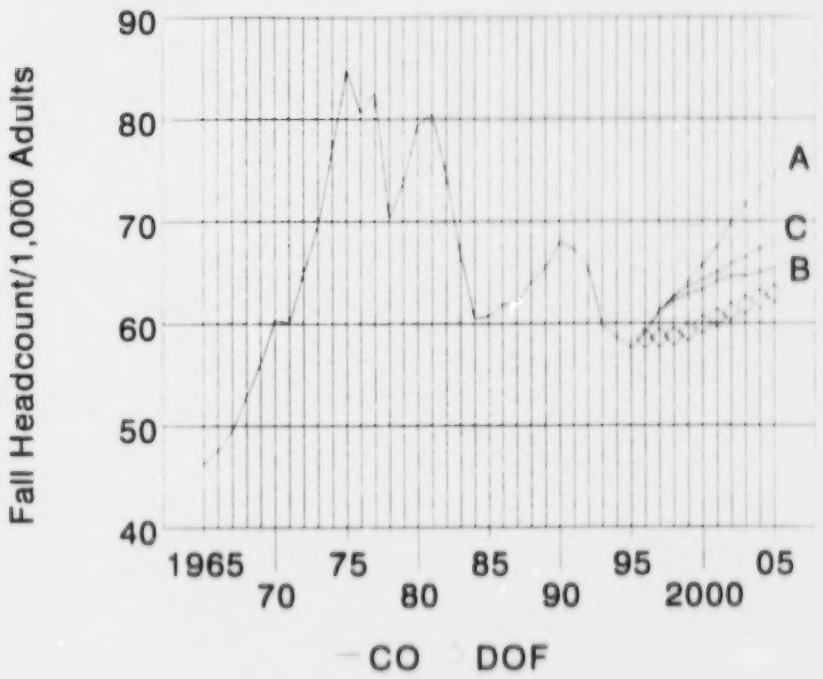
$$E=a+b(P(>17))+c(B)+d(PR)+e(CA13)+F(UNE)+u$$

where,

E=total fall headcount enrollment
P=adult population cohort
B=current expenses of education (CEE) in real $ (adjusted for S&LP index)
PR=annual real $ cost to students for attending (including fees, books and supplies, transportation, and child care)
CA13=Proposition 13: a "dummy" variable
UNE=unemployed
a...f are regression parameters and u=residual term

Figure 6
Assumed Values and Forecasts
Scenarios A, B and C

Community College Participation Rates
1965-95 Actual; 1996-2005 Estimated



Sources: Chancellor's Office, Research and Analysis Unit, April 15, 1997

Notes: Top CO line is result of (1/97) forecast from "Scenario A," in which CCSCE has projected an annual increase in "real personal income" of 3.3% annually. This is higher than most others are projecting, and has no recession that might be expected (based on history) by the end of 1990s.

Bottom CO forecast results from "Scenario B" in which California's economic growth is moderate (slightly lower than historic values) with typical recession around 2000.

Scenario C is slightly more optimistic (and perhaps realistic) forecast than B.

DOF forecast is result of their latest (11/96) projections.

Table 4
Community College Funding Summary
Scenario "A"

($ in millions, except for $/FTES)

Year	Revenue	%Chg	Fall Enrollment	Apport #	FTES %Chg	$/FTES	%Chg	Improvement	%ofTotal*	NEED	DIFF revenue less need
1988-89	$2,123		1,336,275	812,391		$2,613					
1989-90	$2,290	7.9%	1,407,430	858,285	5.6%	$2,668	2.1%				
1990-91	$2,419	5.6%	1,505,381	884,932	3.1%	$2,734	2.5%				
1991-92	$2,475	2.3%	1,515,261	917,839	3.7%	$2,697	-1.4%				
1992-93	$2,415	-2.4%	1,500,393	896,900	-2.3%	$2,693	-0.1%				
1993-94	$2,416	0.0%	1,376,565	864,014	-3.7%	$2,796	3.8%				
1994-95	$2,711	12.2%	1,357,615	853,712	-1.2%	$3,176	13.6%				
1995-96A	$2,969	9.5%	1,336,300	870,357	1.9%	$3,411	7.4%				
1996-97E	$3,167	6.7%	1,395,097	909,523	4.5%	$3,482	2.1%	$63	2.0%		
1997-98B	$3,348	5.7%	1,469,949	940,767	3.4%	$3,559	2.2%	$69	2.1%		
1998-99F	$3,534	5.6%	1,533,964	966,397	2.7%	$3,662	2.9%	$71	2.0%	$3,610	($75)
1999-00	$3,744	5.9%	1,600,770	1,008,485	4.4%	$3,772	3.0%	$75	2.0%	$3,879	($135)
2000-01	$3,963	5.9%	1,671,909	1,053,303	4.4%	$3,885	3.0%	$79	2.0%	$4,172	($208)
2001-02	$4,201	6.0%	1,750,637	1,102,901	4.7%	$4,002	3.0%	$84	2.0%	$4,498	($297)
2002-03	$4,487	6.8%	1,840,960	1,159,805	5.2%	$4,122	3.0%	$90	2.0%	$4,870	($383)
2003-04	$4,756	6.0%	1,923,776	1,211,979	4.5%	$4,246	3.0%	$95	2.0%	$5,241	($485)
2004-05	$5,044	6.0%	2,003,567	1,262,247	4.1%	$4,373	3.0%	$101	2.0%	$5,621	($577)
2005-06	$5,349	6.1%	2,078,792	1,309,639	3.8%	$4,504	3.0%	$107	2.0%	$6,006	($657)

Sources: Chancellor's Office, Research and Analysis Unit, February 5, 1997

Notes: A: Actual; E: Estimated; B: Proposed Governor's Budget; F: Forecast.

*One-half of the program improvement is folded into base; other one-half is a one-time expenditure.

Table 5
Community College Funding Summary
Scenario "B"

($ in millions, except for $/FTES)

Year	Revenue	%Chg	Fall Enrollment	Apport. FTES #	%Chg	$/FTES	%Chg	Improvement	%ofTotal*	NEED	DIFF. revenue less need
1988-89	$2,123		1,336,275	812,391		$2,613					
1989-90	$2,290	7.9%	1,407,430	858,285	5.6%	$2,668	2.1%				
1990-91	$2,419	5.6%	1,505,381	884,932	3.1%	$2,734	2.5%				
1991-92	$2,475	2.3%	1,515,261	917,839	3.7%	$2,697	-1.4%				
1992-93	$2,415	-2.4%	1,500,393	896,900	-2.3%	$2,693	-0.1%				
1993-94	$2,416	0.0%	1,376,565	864,014	-3.7%	$2,796	3.8%				
1994-95	$2,711	12.2%	1,357,615	853,712	-1.2%	$3,176	13.6%				
1995-96A	$2,969	9.5%	1,336,300	870,357	1.9%	$3,411	7.4%				
1996-97E	$3,167	6.7%	1,395,097	909,523	4.5%	$3,482	2.1%	$63	2.0%		
1997-98B	$3,348	5.7%	1,471,035	941,462	3.5%	$3,556	2.1%	$69	2.1%		
1998-99F	$3,503	4.6%	1,524,853	960,657	2.0%	$3,659	2.9%	$70	2.0%	$3,585	($82)
1999-00	$3,635	3.8%	1,569,890	989,031	3.0%	$3,769	3.0%	$73	2.0%	$3,800	($165)
2000-01	$3,733	2.7%	1,610,649	1,014,709	2.6%	$3,882	3.0%	$75	2.0%	$4,014	($281)
2001-02	$3,804	1.9%	1,662,152	1,047,156	3.2%	$3,998	3.0%	$76	2.0%	$4,263	($459)
2002-03	$3,895	2.4%	1,705,301	1,074,339	2.6%	$4,118	3.0%	$78	2.0%	$4,503	($607)
2003-04	$3,986	2.3%	1,736,209	1,093,812	1.8%	$4,242	3.0%	$80	2.0%	$4,720	($734)
2004-05	$4,127	3.5%	1,776,095	1,118,940	2.3%	$4,369	3.0%	$83	2.0%	$4,971	($845)
2005-06	$4,313	4.5%	1,822,271	1,148,031	2.6%	$4,500	3.0%	$86	2.0%	$5,253	($939)

Sources: Chancellor's Office, Research and Analysis Unit, February 5, 1997

Notes: A: Actual; E: Estimated; B: Proposed Governor's Budget; F: Forecast.

*One-half of the program improvement is folded into base; other one-half is a one-time expenditure.

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Source: Chancellor's Office, Research and Analysis Unit, February 5, 1997.

Figure 7
Community College Funding

Table 6
Community College Funding Summary
Scenario "C"

($ in millions, except for $/FTES)

Year	Revenue	%Chg	Fall Enrollment	Apport FTES #	Apport FTES %Chg	$/FTES	%Chg	Improvement %ofTotal*	NEED	DIFF revenue less need
1988 – 89	$2,123		1,336,275	812,391		$2,613			$3,601	($71)
1989 – 90	$2,290	7.9%	1,407,430	856,285	5.6%	$2,668	2.1%		$3,848	($140)
1990 – 91	$2,419	5.6%	1,505,361	884,932	3.1%	$2,734	2.5%		$4,075	($232)
1991 – 92	$2,475	2.3%	1,515,261	917,839	3.7%	$2,697	-1.4%		$4,321	($372)
1992 – 93	$2,415	-2.4%	1,500,393	896,900	-2.3%	$2,693	-0.1%		$4,590	($502)
1993 – 94	$2,416	0.0%	1,376,565	864,014	-3.7%	$2,796	3.8%		$4,654	($624)
1994 – 95	$2,711	12.2%	1,357,615	853,712	-1.2%	$3,176	13.6%		$5,152	($733)
1995 – 96A	$2,969	9.5%	1,336,300	870,357	1.9%	$3,411	7.4%		$5,480	($821)
1996 – 97E	$3,167	6.7%	1,396,434	909,623	4.5%	$3,482	2.1%	$63 2.0%		
1997 – 98B	$3,346	5.7%	1,471,060	941,498	3.5%	$3,556	2.1%	$69 2.1%		
1998 – 99F	$3,531	5.5%	1,531,672	984,984	4.6%	$3,659	2.9%	$71 2.0%		
1999 – 00	$3,707	5.0%	1,589,242	1,001,222	1.6%	$3,760	3.0%	$74 2.0%		
2000 – 01	$3,843	3.7%	1,634,646	1,029,627	2.8%	$3,882	3.0%	$77 2.0%		
2001 – 02	$3,949	2.8%	1,684,126	1,060,999	3.0%	$3,998	3.0%	$79 2.0%		
2002 – 03	$4,088	3.5%	1,737,763	1,094,790	3.2%	$4,118	3.0%	$82 2.0%		
2003 – 04	$4,231	3.5%	1,784,806	1,124,441	2.7%	$4,242	3.0%	$85 2.0%		
2004 – 05	$4,419	4.4%	1,839,608	1,158,963	3.1%	$4,369	3.0%	$88 2.0%		
2005 – 06	$4,659	5.4%	1,900,067	1,197,043	3.3%	$4,500	3.0%	$93 2.0%		

Sources: Chancellor's Office, Research and Analysis Unit, April 15, 1997

Notes: A: Actual; E: Estimated; B: Proposed Governor's Budget; F: Forecast.

*One-half of the program improvement is folded into base; other one-half is a one-time expenditure.

Table 7
Community College Funding Summary
Scenario "M"

($ in millions, except for $/FTES)

Year	Revenue	%Chg	Fall Enrollment	Apport FTES #	%Chg	$/FTES	%Chg	Improvement* $	%ofTotal	NEED	DIFF revenue less need
1988-89	$2,123		1,336,875	812,391		$2,613					
1989-90	$2,290	7.9%	1,407,430	858,285	5.6%	$2,668	2.1%				
1990-91	$2,419	5.6%	1,505,381	884,932	3.1%	$2,734	2.5%				
1991-92	$2,475	2.3%	1,515,261	917,839	3.7%	$2,697	-1.4%				
1992-93	$2,415	-2.4%	1,500,393	896,900	-2.3%	$2,693	-0.1%				
1993-94	$2,416	0.0%	1,376,565	864,014	-3.7%	$2,796	3.8%				
1994-95	$2,711	12.2%	1,387,615	853,712	-1.2%	$3,176	13.6%				
1995-96A	$2,969	9.5%	1,336,300	870,387	1.9%	$3,411	7.4%				
1996-97E	$3,230	8.8%	1,407,335	902,107	3.6%	$3,581	5.0%				
1997-98B	$3,490	8.0%	1,445,335	929,170	3.0%	$3,756	4.9%	$96	2.8%		
1998-99F	$3,688	5.7%	1,533,868	966,337	4.0%	$3,973	5.8%	$105	3.0%	$3,944	($256)
1999-2000	$3,910	6.0%	1,595,223	1,004,990	4.0%	$4,209	5.9%	$117	3.0%	$4,347	($437)
2000-01	$4,139	5.9%	1,659,032	1,045,190	4.0%	$4,464	5.8%	$124	3.0%	$4,779	($640)
2001-02	$4,366	5.5%	1,725,393	1,086,998	4.0%	$4,708	5.7%	$131	3.0%	$5,249	($882)
2002-03	$4,642	6.3%	1,794,409	1,130,478	4.0%	$4,972	5.6%	$139	3.0%	$5,760	($1,118)
2003-04	$4,897	5.5%	1,866,185	1,175,697	4.0%	$5,246	5.5%	$147	3.0%	$6,315	($1,418)
2004-05	$5,169	5.5%	1,940,833	1,222,725	4.0%	$5,531	5.4%	$155	3.0%	$6,918	($1,749)
2005-06	$5,456	5.6%	2,018,466	1,271,634	4.0%	$5,825	5.3%	$164	3.0%	$7,571	($2,116)

Sources: Chancellor's Office, Research and Analysis Unit, October 27, 1997.

Notes: A: Actual; E: Estimated; B: Proposed Governor's Budget; Forecast:

*All of the program improvement is folded into base.

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Table 8
Community College Funding Summary
Scenario "N"

($ in millions, except for $/FTES)

Year	Revenue	%Chg	Fall Enrollment	Apport FTES #	%Chg	$/FTES	%Chg	Improvement* $	%ofTotal	NEED	DIFF revenue less need
1988-89	$2,123		1,336,275	812,391		$2,613					
1989-90	$2,290	7.9%	1,407,430	858,285	5.6%	$2,668	2.1%				
1990-91	$2,419	5.6%	1,505,381	884,932	3.1%	$2,734	2.5%				
1991-92	$2,475	2.3%	1,515,261	917,839	3.7%	$2,697	-1.4%				
1992-93	$2,415	-2.4%	1,500,393	896,900	-2.3%	$2,693	-0.1%				
1993-94	$2,416	0.0%	1,376,565	864,014	-3.7%	$2,796	3.8%				
1994-95	$2,711	12.2%	1,357,615	853,712	-1.2%	$3,176	13.6%				
1995-96A	$2,969	9.5%	1,336,300	870,357	1.9%	$3,411	7.4%				
1996-97E	$3,230	8.8%	1,407,335	902,107	3.6%	$3,581	5.0%				
1997-98B	$3,490	8.0%	1,445,335	929,170	3.0%	$3,756	4.9%	$96	2.8%		
1998-99F	$3,688	5.7%	1,533,868	966,337	4.0%	$3,973	5.8%	$105	3.0%	$3,944	($256)
1999-2000	$3,894	5.6%	1,595,223	1,004,990	4.0%	$4,203	5.9%	$117	3.0%	$4,346	($452)
2000-01	$4,049	4.0%	1,659,032	1,045,190	4.0%	$4,451	5.8%	$121	3.0%	$4,773	($724)
2001-02	$4,157	2.7%	1,725,393	1,086,998	4.0%	$4,699	5.6%	$125	3.0%	$5,232	($1,076)
2002-03	$4,292	3.3%	1,794,409	1,130,478	4.0%	$4,954	5.4%	$129	3.0%	$5,729	($1,437)
2003-04	$4,432	3.3%	1,866,185	1,175,697	4.0%	$5,218	5.3%	$133	3.0%	$6,265	($1,833)
2004-05	$4,629	4.4%	1,940,833	1,222,725	4.0%	$5,486	5.2%	$139	3.0%	$6,846	($2,216)
2005-06	$4,880	5.4%	2,018,466	1,271,634	4.0%	$5,765	5.1%	$146	3.0%	$7,478	($2,598)

Source: Chancellor's Office, Research and Analysis Unit, October 27, 1997

Notes: A: Actual; E: Estimated; B: Proposed Governor's Budget; Forecast:

*All of the program improvement is folded into base.

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SCENARIO M

SCENARIO N

Figure 8
Proposed Community College Funding

Sources: Chancellor's Office, Research and Analysis Unit, October 27, 1997

Table 9
Summary of Community College Planning Scenarios
2000-01 and 2005-06

Scenario	2000–01				2005–06			
	Enrollment	Enroll per 1000 Adults	$/FTES	Budget Gap	Enrollment	Enroll per 1000 Adults	$/FTES	Budget Gap
A	1,671,909	66	$3,885	($208)	2,078,792	75	$4,504	($657)
B	1,610,649	63	$3,882	($281)	1,822,271	65	$4,500	($939)
C	1,634,645	65	$3,882	($232)	1,900,067	68	$4,500	($821)
M	1,725,393	65	$4,454	($640)	2,018,466	73	$5,765	($2,116)
N	1,725,393	65	$4,451	($724)	2,018,466	73	$5,765	($2,598)

Sources: Chancellor's Office, Research and Analysis Unit, October 27, 1997

Notes: Scenarios A, B, and C were prepared prior to completion of the 1997-98 appropriations bill. Scenarios M and N reflect some added funding for 1996-97 and 1997-98 contained in that appropriations bill.